



Basic module
WIRECOM Technologies

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Introduction

The nodes which form the basis of the WIRECOM Technologies system are designed to regulate the demand of energy in an autonomous manner. They adapt themselves according to the building equipments and are made up of integrated circuit cards.

WIRECOM Technologies offers a wide range of products according to the requirements of a building.

Each range of cards is made up of at least one motherboard on which daughter boards can be connected. These motherboards are placed on the installations that require regulation. Secondary cards and interfaces of communication between the user and the system have been developed in order to make the system more efficient and accessible.

The WIRECOM Technologies system is based on the combination of several technologies guided by mother boards. Their **basic module** is elaborated hereafter, followed by a different range of cards and interfaces.

Two ranges of cards exist today:

- The range of cards adapted to all applications (except fan convectors) : ICPV4L;
- The range of cards adapted to fan convectors: ICPV4L – VC.

To these ranges of cards **the range of interfaces between the user and the system are added on**. This range enables the user to manage the system himself and gives him an extra margin of actions to adapt the demand of energy to his needs in a better manner.

The 4th version of the **basic module** WIRECOM Technologies is the card **ICPV4**, equipped with the LonWorks® technology¹.

Functions

The motherboards have been designed to:

- process and store information;
- communicate among each other to exchange data (via the PLC² and the LonTalk protocol);
- communicate with the sensors and the actuators enabling an optimized management of the energies of the building;
- ensure the function of regulation as per the collected data.

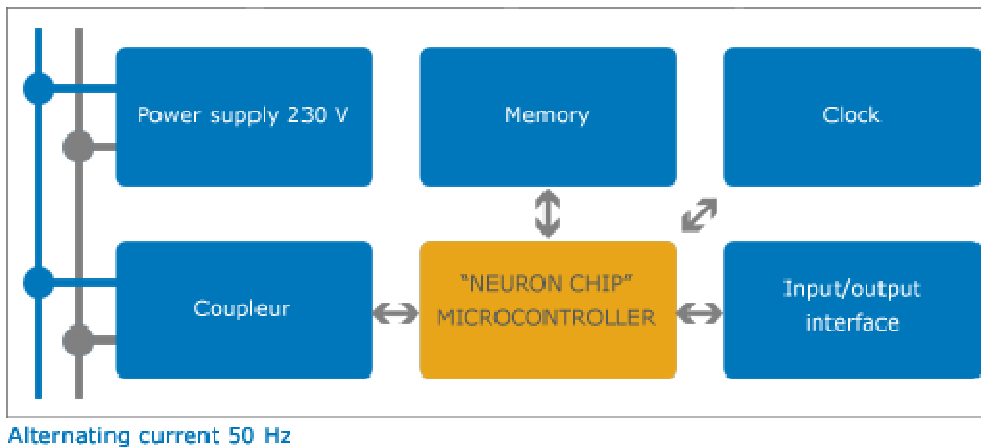
General features

- Autonomy ;
- Compatible with the systems of BMS and CTM;
- Parameters are configured at the time of delivery and can be modified after the card is installed;
- Operation is possible without a control centre.

¹ Trademark of Echelon recognised as the **European** standard of open systems within the framework of BMS : EN16484 : Ref. technical page on PLC

² Adhere to the standard CENELEC EN50065-1

Diagram of the conception of the basic module



Technical features

The **microcontroller** ensures regulation according to the PID algorithm and manages storage, planning and data warehousing. The algorithm is a program of the ICPV4 card. It is activated or not upon installation.

The **coupler** manages the intercommunication through PLC with the other cards (no bus): frequency of 115 KHz to 132 KHz;

The **input/output interface** enables the motherboard to communicate with the daughterboards;

The **clock** provides information about the date and the time;

The **card** gets a power supply of 230 V in alternating current at 50 Hz.